general population controls. **RESULTS:** In total, 49 026 patients with a HCV diagnosis were identified, of which 34 633 CHC patients were still alive and in Sweden on December 31st 2013 resulting in a CHC prevalence of 0.36% in 2013 (in males: 0.46%; in females: 0.26%). Mean age in 2013 was 49 years (SD 12.95). Chronic liver disease and complications or symptoms of liver disease (including varices, ascites, liver cirrhosis, liver cancer and liver transplantation) were diagnosed and registered in 11% of CHC patients. Overall, 14.4% of all CHC patients had a co-infection with hepatitis B or HIV compared with 0.3% in the matched general population controls. The prevalence of psychiatric disorder, vascular, circulatory, and metabolic disease were significantly higher in CHC patients compared with the general population controls. **CONCLUSIONS:** Our CHC prevalence was lower than previously reported. Patients with CHC had notably increased risk of other diseases compared to matched general population controls.

PIN2

OUTCOME RESEARCH TO INVESTIGATE THE ACTUAL STATUS OF MRSA INFECTION AND USAGE OF ANTI-MRSA DRUGS IN REAL CLINICAL SETTINGS IN JAPAN : A RETROSPECTIVE DATABASE STUDY

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OBJECTIVES: To provide real-world evidence from a Japanese healthcare database on the status of MRSA infections and the usage of anti-MRSA drugs in actual clinical settings. The overall medical treatment of MRSA patients was also investigated. **METHODS:** This was a retrospective study based on claims data from a Japanese healthcare database composed of annual health check and claims from approximately 2.3 million members of employment-based health insurance groups and their dependents. The data of patients who had at least one record of being diagnosed with an MRSA infection (U80.1 in ICD-10/v2010) and being prescribed anti-MRSA drugs approved in Japan were extracted from the 2014 database. An adult patient was defined as 15 years of age or older. **RESULTS:** We identified patients (35.6% female, 77.7% adult) with an infection episode matching our definition. Among the 484 infection episodes, the top 3 infections were bacteremia (34.9%), pneumonia (19.6%), and surgical site infections (SSI) (7.2%). The site of infection was unknown in 29.8% of the patients. During the first month of the episode, Vancomycin, Teicoplanin, and Linezolid were prescribed in 72.9%, 16.9%, and 12.2% of patients, respectively. Compliance with the recommendations (drugs in A-I/A-II categories) of the latest Japanese MRSA treatment guidelines was followed in 77.3%, 93.8%, and 89.7% of adult patients with bacteremia, pneumonia, and SSI, respectively. Blood culture tests were conducted in 54.7%, 37.0%, and 27.6% of the adult episodes of bacteremia, pneumonia, and SSI. **CONCLUSIONS:** This is the first investigation to look at the actual status of MRSA infection using insurance claims data. It was found that the compliance with the Japanese MRSA treatment guidelines were generally high. However, utilization rate of blood culture test was low, even for the bacteremia patients. Further investigation is needed to determine the reason for this in order to ensure accurate diagnosis of MRSA infections in the future.

PIN3

COPING WITH DISCREPANCIES IN EPIDEMIOLOGICAL DATA FROM VARIOUS SOURCES FOR LOW-INCIDENCE DISEASES: THE CASE OF MULTIDRUG-RESISTANT TUBERCULOSIS IN GERMANY

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OBJECTIVES: Multidrug-resistant tuberculosis (MDR-TB) is designated an orphan disease in Germany, with less than 100 patients per year. TB case reporting has been obligatory since 2001 due to the Protection against Infection act (IfSG). The objective of this study was to compare the incidence of MDR-TB from different epidemiological data sources in Germany with data collected by the Robert-Koch-Institute (RKI) according to the legal requirement. **METHODS:** The following potential sources of epidemiological data of MDR-TB in Germany (for the year 2012) were searched: a systematic review of the literature, data from a statutory sickness fund (SHI) and data from the Federal Office of Administration (BVA) used for the risk adjustment scheme (Morbi-RSA) in the social health insurance system. Data from these sources were then compared with those collected by the RKI. **RESULTS:** The systematic literature review provided 445 relevant abstracts which were screened by two independent reviewers. Selection of 16 possible full text papers revealed no relevant publications on MDR-TB in Germany. Data from sickness funds as well as the BVA also showed no reported cases of MDR-TB, although both gave indications on the incidence of drug-sensitive TB (91 cases/100,000 & 52 cases/100,000, respectively). The data provided by the RKI reported 4,187 cases of TB (incidence: 5.2 cases/100,000) of which 65 cases (2.3%) were MDR-TB. **CONCLUSIONS:** Two factors are most striking: reports specific to MDR-TB are generally hard to find in SHI databases due to a lack of specific ICD-10 codes, but can be approximated with ICD-10 codes for drug-sensitive TB plus medication use. Furthermore, information on TB incidence differs widely among the various data sources in Germany, possibly due to the different ways in which data are collected.

PIN4

THE USE OF SINGLE-ARM EVIDENCE IN THE COMPARATIVE EFFICACY OF INTERFERON-FREE ANTIVIRALS FOR TREATMENT-NAÏVE HEPATITIS C GENOTYPE 1

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OBJECTIVES: Single-arm trials have played a major role in assessing the efficacy of interferon-free antiviral regimens for hepatitis C genotype 1. To facilitate evidence synthesis, we have devised methods to integrate single-arm evidence into the network meta-analysis (NMA) framework to indirectly compare interferon-free and interferon-containing antiviral regimens. **METHODS:** We conducted a systematic literature review (May, 2015) to identify clinical trial evidence (i.e. randomized controlled trials, non-randomized controlled trials, and single-arm clinical trials) assessing sustained virological response rates among interferon-free and interferon-containing antiviral regimens for hepatitis C. NMA require that the network is connected in order to facilitate adjusted indirect comparisons by which the treatment effect is isolated from the study effect. The study effects are estimated using common comparators. In the absence of common comparators, we incorporated the single-arm data directly into the Bayesian framework using simulated controls. The simulated controls were obtained by first modeling the reference treatment, and then using the constructed model to predict the most likely control outcome values given the observed trial characteristics. Using the simulated controls, traditional NMA methods were applied to the resulting data. **RESULTS:** Seventy clinical trial arms, including 8,997 patients, contributed to the analysis of sustained virological response (SVR). All interferon-free regimens were statistically advantageous when compared to peginterferon-ribavirin (RR>2.00). Furthermore, all interferon-free regimens were statistically better than telaprevir+peginterferon-ribavirin, boceprevir+peginterferon-ribavirin, simeprevir+peginterferon-ribavirin, and sofosbuvir+ribavirin (RR>1.25). No statistical differences were observed between the interferon-free regimens. Given the large disparity between the two treatment classes, use of simulated-control NMA did not lead to large differences in conclusions when compared to the naïve approach; however, the magnitude of estimates and rankings were affected. **CONCLUSIONS:** The use of single-arm trials to assess interferon-free antivirals is common. We have shown that advanced statistical modeling can be used to assess the comparative efficacy new interferon-free antiviral regimens.

PIN5

DACLATASVIR +ASUNAPREVIR VERSUS SOFOSBUVIR/LEDIPASVIR FOR THE TREATMENT OF CHRONIC HEPATITIS C GENOTYPE 1 IN JAPANESE PATIENTS: A MATCHING-ADJUSTED INDIRECT COMPARISON

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OBJECTIVES: To compare daclatasvir and asunaprevir (DCV+ASV) versus sofosbuvir/ledipasvir (SOF/LDV) for HCV genotype 1b in Japanese patients without nonstructural protein 5A (NS5A) polymorphisms. **METHODS:** Individual patient data were available from the two Phase 3 trials of DCV+ASV conducted in Japan (BMS 026/031); published summary data were extracted from the one Phase 3 trial of SOF/LDV conducted in Japan (Mizokami et al.). Patients treated with DCV+ASV without baseline NS5A polymorphisms at L31F/I/M/V or Y93H were included in the present analysis and were subject to the enrollment criteria reported in the SOF/LDV trial. To adjust for cross-trial differences, patients in the DCV+ASV trial were weighted to match reported summary baseline characteristics: age, BMI, gender, prior treatment experience, prior treatment response, interferon eligibility, HCV RNA level, IL28B genotype, cirrhosis status, alanine aminotransferase, albumin, and platelets. Sustained virologic response at week 12 post-treatment (SVR12) and discontinuation due to adverse events (AEs) were compared between the treatments. **RESULTS:** Of the 363 patients treated with DCV+ASV, 282 had no baseline NS5A polymorphisms. Of these, 252 met the inclusion criteria of the SOF/LDV trial (n=171) and were included in the analysis. Prior to adjustment, the rate of SVR12 was lower among patients treated with DCV+ASV than SOF/LDV (95.2% vs. 100%; p=0.004) and the rate of discontinuation due to AEs was higher among patients treated with DCV+ASV than SOF/LDV (4.8% vs. 0.0%; p=0.004). After adjustment, both the rate of SVR12 and discontinuation due to AEs were similar between patients treated with DCV+ASV and SOF/LDV (SVR12: 99.3% vs. 100%; p=0.398; discontinuation due to AEs: 1.3% vs. 0.0%; p=0.327). **CONCLUSIONS:** After adjustment for cross-trial differences in baseline characteristics, DCV+ASV and SOF/LDV were associated with similar efficacy and discontinuation due to AEs in the treatment of HCV genotype 1b in Japanese patients without NS5A polymorphisms at L31F/I/M/V or Y93H.

PIN6

PROBIOTICS SIGNIFICANTLY REDUCE MORTALITY IN PRETERM NEWBORNS WITH NECROTISING ENTEROCOLITIS: RESULTS OF LARGE NETWORK META-ANALYSIS

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OBJECTIVES: Several randomized control clinical trials have shown that Probiotics lower the death rates of preterm newborns with necrotising enterocolitis. However, most clinical guidelines do not currently support use of Probiotics. The objective of this study was to conduct a meta-analysis of mortality data from all available randomized control trials for Probiotics. **METHODS:** A systematic literature search for randomized clinical trials for use of Probiotics in preterm newborns with necrotising enterocolitis (NEC) was undertaken for the databases Pubmed, Embase, Biosis, Google Scholar and Cochrane. Data was collected for the study type, methods, country and key findings. Extracted study data included study design, patient charatcertristcis and NEC related outcomes. A random effects meta-analysis model was developed to estimate overall odds ratios and risk ratio. A bayesian random effects network meta-analysis model with vague and informative priors was also developed. **RESULTS:** We identified 350 references and found 23 randomized trials in 7136 newborns with 408 events. The mean size of the clinical trials was approximately 300 patients. In the Probiotics and Placebo groups, there were 166 and 242 deaths, respectively. The random effects Odds Ratio for mortality for Probiotics versus Placebo was 0.69 (95% confidence interval 0.56 and 0.86; P=0.0007). The random effects risk ratio for mortality for Probiotics versus Placebo was 0.72 (95% confidence interval 0.60 and 0.88; P=0.00010). **CONCLUSIONS:** This large meta-analysis shows that use of Probiotics significantly reduces the risk and odds of death in preterm newborns with necrotising enterocolitis. There is an urgent need for updating clinical guidelines based on this cumulative evidence.